

Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application.

Listing of Claims

1. - 20. (Canceled)

21. (Previously Presented) A broad band ultraviolet achromatic catadioptric inspection system, comprising a broad band ultraviolet objective configured to image a first object at a first ultraviolet wavelength and to image a second object at a second ultraviolet wavelength different than the first ultraviolet wavelength, wherein the objective comprises a first lens and a second lens having different dispersions, and wherein the system is configured to detect defects on the first or second object using the image of the first or second object, respectively.

22. (Previously Presented) The system of claim 21, wherein the first and second objects are selected from the group consisting of a reticle, a resist, and a semiconductor wafer.

23. (Previously Presented) The system of claim 21, wherein the first and second ultraviolet wavelengths are selected based on the first and second objects, respectively.

24. (Previously Presented) The system of claim 21, wherein the first and second objects comprise different materials, and wherein the first and second ultraviolet wavelengths are selected based on reflectivities of the different materials at different ultraviolet wavelengths.

25. (Previously Presented) The system of claim 21, wherein the first and second ultraviolet wavelengths are selected from the group consisting of 193 nm, 248 nm, and 365 nm.

26. (Previously Presented) The system of claim 21, wherein the first and second ultraviolet wavelengths are separated by about 10 nm to about 50 nm.

27. (Previously Presented) The system of claim 21, wherein the first or second object comprises a reticle, and wherein the first or second ultraviolet wavelength is an exposure wavelength for which the reticle has

been constructed.

28. (Previously Presented) The system of claim 21, wherein the first and second objects comprise different resists, and wherein the first and second ultraviolet wavelengths comprise about 313 nm and about 220 nm, respectively.

29. (Previously Presented) The system of claim 21, wherein a field size of the objective is about 0.5 mm diameter.

30. (Previously Presented) The system of claim 21, wherein the objective has a significantly flattened field.

31. (Previously Presented) The system of claim 21, wherein the objective corrects primary and residual longitudinal and lateral color over a wavelength band of at least 20 nm.

32. (Previously Presented) The system of claim 21, wherein the objective further comprises a focusing lens group configured to focus ultraviolet light at an intermediate image, a field lens group disposed proximate the intermediate image, wherein the field lens group comprises the first lens and the second lens, and a catadioptric relay group configured to form a final image of the intermediate image.

33. (Previously Presented) The system of claim 21, further comprising an excimer laser configured to illuminate the first and second objects with ultraviolet light at the first and second ultraviolet wavelengths, respectively.

34. (Previously Presented) The system of claim 21, wherein the objective is further configured to image the first and second objects with light scattered by the first and second objects, respectively.

35. (Previously Presented) The system of claim 21, further comprising a ring dark field illumination source configured to illuminate the first and second objects with ultraviolet light at the first and second ultraviolet wavelengths, respectively.

36. (Previously Presented) The system of claim 21, wherein the system is further configured to classify defects and features on the first or second object using the image of the first or second object, respectively.

37. (Previously Presented) A broad band ultraviolet achromatic catadioptric inspection system, comprising:

a broadband ultraviolet light source configured to illuminate a first object with a first ultraviolet wavelength and to illuminate a second object with a second ultraviolet wavelength different than the first ultraviolet wavelength; and

a broad band ultraviolet objective configured to image the first object at the first ultraviolet wavelength and to image the second object at the second ultraviolet wavelength, wherein the objective comprises a first lens and a second lens having different dispersions, and wherein the system is configured to detect defects on the first or second object using the image of the first or second object, respectively.

38. (Previously Presented) The system of claim 37, wherein the first or second object comprises a reticle, and wherein the first or second ultraviolet wavelength is an exposure wavelength for which the reticle has been constructed.

39. (Previously Presented) The system of claim 37, wherein the objective is further configured to image the first and second objects with light scattered by the first and second objects, respectively.

40. (Previously Presented) The system of claim 37, wherein the light source comprises an excimer laser.

41. - 51. (Canceled)

CONCLUSION

This paper constitutes a complete response to the issues raised in the Office Action mailed February 4, 2005. Accordingly, Applicants assert that pending claims 21-40 are in condition for allowance. If the Examiner has any questions, comments, or suggestions, the undersigned agent earnestly requests a telephone conference.

No fees are required for filing this amendment; however, the Commissioner is authorized to charge any additional fees which may be required, or credit any overpayment, to Daffer McDaniel, LLP Deposit Account No. 50-3268/5589-00807.

Respectfully submitted,



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